

# Warning – Your Child's Car Seat Could Be Loaded with Toxic Chemicals

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## STORY AT-A-GLANCE

- › Buying a car seat depends on more than safety ratings and convenience, since they pose a significant risk of exposure to toxic chemicals
- › A 2015 car seat study shows that while manufacturers made progress in reducing the amount of toxins in car seats, the products are still laden with flame retardants linked to multiple health conditions
- › Reducing your child's toxic load can diminish the overall risk of certain cancers, neurobehavioral changes, hyperactivity and infertility

***Editor's Note: This article is a reprint. It was originally published December 28, 2016.***

Buying a car seat for your child should not have to involve worrying about **toxic chemicals**. It is ironic that the seat you depend upon to protect your child in case of a car accident can expose your child to toxic chemicals known to trigger serious health damage, particularly to young children.

The products you depend on could be loaded with **phthalates**, flame retardants and bisphenol A (**BPA**). Instead of being held accountable for toxic exposures, these companies are given the green light for production and distribution to an unsuspecting public.

Following a study in 2011 in which researchers discovered at least 60% of more than 150 car seats tested contained at least one toxic chemical,<sup>1</sup> car seat manufacturers began reducing the most toxic of these.<sup>2</sup>

It is important that you continue to use a car seat to transport your children as this is the safest way to protect your child in case of a car accident. However, there are several ways to reduce your child's exposure to toxins while they require a car seat to stay safe in the car.

## **Car Seat Study Reveals Progress and Lingering Hazards**

Although the 2015 study published by the Ecology Center<sup>3</sup> demonstrated that car seats continue to contain toxic flame-retardant chemicals, it also showed that manufacturers have started to make progress in eliminating some of the most toxic chemicals.

However, while reducing chemicals with the greatest toxicity represents progress, no child should be exposed to chemicals with known negative health effects.

For the first time since the group began testing car seats, **no car seat tested positive for lead**, which negatively affects the liver, kidneys, reproductive system and nervous system.<sup>4</sup> Car seats also did not test positive for chlorinated tris, a chemical with known cancer-causing properties.<sup>5</sup>

Current U.S. Federal regulations require manufacturers to comply with standards to prevent flammability of the product. Researchers in this study suggest manufacturers can comply with the standards without using toxic chemicals, although the process would also make the car seats more expensive. Jeff Gearhart, Ecology Center research director, commented:<sup>6</sup>

*"It is essential that parents put their kids in properly installed car seats, which provide vital crash protection, regardless of chemical hazard. However, there are some seats that are healthier than others in terms of toxic chemical content."*

## Flame Retardants in More Than Car Seats

The HBO documentary "Toxic Hot Seat"<sup>7</sup> unravels the toxic truth of flame retardants, revealing many disturbing facts about these allegedly "life-saving" chemicals. The film is no longer free but available to watch on your computer.

Car seats are just one of many different household products containing **flame retardants** used to comply with flammability standards. So, while car seats are the subject of the featured study, toxic chemicals are also found in bedding, mattresses, furniture, toys, teething toys and strollers.

There are a number of different toxic chemicals used to reduce flammability of a product; however, all are considered dangerous carcinogens, hormone disrupters and developmental toxins. Even though many of these toxins are still used in children's toys, it doesn't erase the fact that children's neurological systems are especially vulnerable to the effects of dust and fumes.

While the authors of the Children's Car Seat Study say there have been improvements in the manufacturing of car seats – this was the first time chlorinated tris was not detected in the evaluation of car seats – there continues to be risks to young children.<sup>8</sup> For example, all 15 seats studied contained flame-retardant chemicals.

Some manufacturers have stopped using brominated flame retardants as they are particularly dangerous, but the chemicals being substituted have not been thoroughly tested. One such substitute is V6, which is applied to polyurethane foam in cars and furniture.

In a study published in Environmental Science and Technology, researchers found concentrations of the chemical were higher in cars than in the home, and tris phosphate, a known carcinogen, was part of the chemical mixture in V6 as an impurity.<sup>9</sup>

Fear of fire is primal. This is likely the reason it is difficult to get laws repealed related to the use of fire-retardant chemicals, despite the fact they do more harm than good to both you and the firefighters who respond to a fire.<sup>10</sup>

# Flame Retardants Contribute to Neurodevelopmental Delays and Hyperactivity

A study from the American Chemical Society (ACS) found certain flame-retardant chemicals increased the amount of toxic carbon monoxide and hydrogen cyanide gas in a fire.<sup>11</sup> Inhaling these gasses is the leading cause of death in fires, not burns.

Flame retardants also affect your unborn baby. At a public hearing in California, Gretchen Lee Salter, senior program and policy manager for the Breast Cancer Fund, testified:<sup>12</sup>

*"Toxic flame retardants cross the placental barrier and can alter normal breast development setting that child on a path for increased breast cancer risk."*

Flame retardants are linked to neurodevelopmental delays and hyperactivity in children. These toxic chemicals also accumulate in breast milk. Research has demonstrated that children born to mothers with higher levels of flame-retardant chemicals in their body had a 4.5-point average decrease in IQ.<sup>13</sup>

Polybrominated diphenyl ethers (PBDEs) and polybrominated biphenyls (PBBs) are two of the most common flame-retardant chemicals used in homes, businesses and transportation industries, and are considered persistent organic pollutants.<sup>14</sup> These chemicals, which are used in your furniture and baby toys, have been found to have both prenatal and childhood neurodevelopmental consequences.

Researchers have demonstrated that exposure in childhood is strongly associated with poor attention span, reduced fine motor coordination and a decrease in cognitive ability.<sup>15</sup>

These results were from the Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS) cohort of school-age children, and contribute to a growing body of evidence that these chemicals have a significantly adverse impact on children's neurodevelopmental behavior.

# More Negative Health Problems Bring Effectiveness of Flame Retardants Into Question

PBDEs are structurally very similar to polychlorinated biphenyls (PCBs). Historically, exposure to PCBs has resulted in a strong association with liver, gastrointestinal, bone marrow and multiple other organ system cancers.<sup>16</sup> Both PCBs and PBDEs are magnified through the food chain and are stored in fat cells.<sup>17</sup>

This means that the chemicals are not metabolized out of the body and, as humans are at the top of the food chain, the foods we eat could have high amounts of PBDEs or PCBs. Serious health effects associated with exposure to these chemicals include neurotoxicity, developmental delays, neurobehavioral changes and an increased risk for certain cancers.<sup>18</sup>

Interestingly, you might also find [flame-retardant chemicals](#) in your sodas. Brominated vegetable oils (BVO), first developed as a flame retardant, have been added to sodas and drinks for decades. It was only in 2014 that Coca-Cola and PepsiCo bowed to public pressure and agreed to take BVO out of their sodas.<sup>19</sup>

Bromide has a sedative effect when levels are close to toxicity. Bromide also accumulates in the body, increasing your risk of experiencing toxic effects. In the 1950s, overuse of products with bromide resulted in bromide-induced comas.<sup>20</sup>

Both Coca-Cola and Pepsi deny that their decisions to remove BVO are in any way health-related. Coca-Cola says it plans to replace BVO with sucrose acetate isobutyrate (SAIB) and glycerol ester of rosin (GEGR and GEWR). Unfortunately, the safety of these additives is debatable, as very few studies exist. Germany and other countries have found safer, more natural substitutes for BVO.

The risks of bromine are driven by a build-up of bromine and a resulting deficiency in iodine, and can include an increased risk of cancer,<sup>21,22</sup> infertility,<sup>23</sup> psychological disorders, skin rashes,<sup>24</sup> fatigue, anorexia and abdominal pain.

# Keeping Your Child Safe from Toxic Chemicals

Remember, pound for pound, children have a greater exposure to toxic chemicals, both in the air and from exposure to chemicals within the dust in your home. Children and pets, who are closer to the ground, are also more likely to ingest them. Children also have an immature neurological system that is still developing, and have a lower number of certain chemical-binding proteins, which allows more chemicals to reach their organs.

The fact that they also have a reduced ability to detoxify chemicals and excrete them from their body increases the potential of these chemicals to do significant damage to their health over the long term. In order to reduce the risk, there are a number of ways to reduce your child's chemical burden:

**Breastfeed** your infant and use only organic and/or locally grown fresh foods.

Use only glass baby bottles.

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Use **natural fabrics** or untreated wooden toys instead of plastic.

Have your tap water tested for contaminants; if found, install an appropriate water filter, even on your bath and shower.

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Switch to natural products for toiletries, including shampoo, fluoride-free toothpaste, lotions and laundry detergent.

Use only natural cleaning products in your home, such as baking soda and white vinegar.

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Look for "green" toxin-free alternatives for regular paint, carpeting and floor coverings.

Choose toxin-free furniture for the nursery.

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Vacuum the car seat and car frequently.

Use the car seat only for transportation and not after your child is out of the car.

Invest in a standard stroller that doesn't use the car seat.

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Wash your hands and your child's hands frequently as children often put their fingers in their mouths.

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Don't buy furniture with a TB 117 label, as these contain flame-retardant chemicals.

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Damp dust your furniture and floors regularly.

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Use wooden chairs without padding at the table, and don't eat on, around or near your couch.

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Before purchasing new furniture, carpeting or products, let the salespeople know you're looking for products without flame-retardant chemicals.

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The Ecology Center has a list of the best and worst picks for car seats<sup>25</sup> in terms of chemical exposure. Make your decision balanced on toxic exposure and safety ratings.

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Roll down your windows to outgas the car before putting on the air conditioning or heating or you'll be recirculating toxic air.

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The hotter the car gets, the more toxic gas is released in the car. If left in the sun consider cracking open one window, remembering to close it if rain is expected.

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Look for an organic or 100% wool **mattress** to reduce exposure to PBDEs, which are mandated in flame-retardant mattresses.

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Keep nontoxic plants in your home to reduce the overall toxic load of chemicals in the air in your home.

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Eight or more hours a day with your baby's face pressed to the mattress increases the exposure to toxic chemicals.

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Open your home windows each day for 15 minutes, summer and winter, to help with gas exchange and reduce the toxic load in your home.

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## **These Toxic Chemicals Pose Risks to Adults as Well**

Although the featured study primarily highlights the risks of toxic chemicals for children, these substances also pose significant dangers to adults. Phthalates, PBDEs and BPA are xenoestrogens, which are types of endocrine-disrupting chemicals (EDCs) that can mimic or interfere with the action of estrogen in your body.

Exposure to these chemicals can lead to a range of health issues including reproductive problems, thyroid dysfunction and metabolic disorders. One of the best ways to counteract the effects of EDCs in adults is with progesterone, a natural anti-estrogen compound. I recommend using transmucosal progesterone mixed with vitamin E, as described below.

## **How to Use Progesterone**

Before you consider using progesterone, it is important to understand that it is not a magic bullet, and that you get the most benefit by implementing a Bioenergetic diet approach that allows you to effectively burn glucose as your primary fuel without backing up electrons in your mitochondria that reduces your energy production. My new book, "Your Guide to Cellular Health: Unlocking the Science of Longevity and Joy" comes out very soon and covers this process in great detail.

Once you have dialed in your diet, an effective strategy that can help counteract estrogen excess is to take transmucosal progesterone (i.e., applied to your gums, not oral or transdermal), which is a natural estrogen antagonist. Progesterone is one of only four hormones I believe many adults can benefit from. (The other three are thyroid hormone T3, DHEA and pregnenolone.)



I do not recommend transdermal progesterone, as your skin expresses high levels of 5-alpha reductase enzyme, which causes a significant portion of the progesterone you're taking to be irreversibly converted primarily into allopregnanolone and cannot be converted back into progesterone.

## **Ideal Way to Administer Progesterone**

Please note that when progesterone is used transmucosally on your gums as I advise, the FDA believes that somehow converts it into a drug and prohibits any company from advising that on its label. This is why companies like Health Natura promotes their progesterone products as "topical."

However, please understand that it is perfectly legal for any physician to recommend an off-label indication for a drug to their patient. In this case, progesterone is a natural hormone and not a drug and is very safe even in high doses. This is unlike synthetic progesterone called progestins that are used by drug companies, but frequently, and incorrectly, referred.

Dr. Ray Peat has done the seminal work in progesterone and probably was the world's greatest expert on progesterone. He wrote his Ph.D. on estrogen in 1982 and spent most of his professional career documenting the need to counteract the dangers of excess estrogen with low LA diets and transmucosal progesterone supplementation.

He determined that most solvents do not dissolve progesterone well and discovered that vitamin E is the best solvent to optimally provide progesterone in your tissue. Vitamin E also protects you against damage from LA. You just need to be very careful about which vitamin E you use as most supplemental vitamin E on the market is worse than worthless and will cause you harm not benefit.

It is imperative to avoid using any synthetic vitamin E (alpha tocopherol acetate – the acetate indicates that it's synthetic). Natural vitamin E will be labeled "d alpha tocopherol." This is the pure D isomer, which is what your body can use.

There are also other vitamin E isomers, and you want the complete spectrum of tocopherols and tocotrienols, specifically the beta, gamma, and delta types, in the effective D isomer. As an example of an ideal vitamin E, you can look at the label on our vitamin E in our store. You can use any brand that has a similar label.

You can purchase pharmaceutical grade bioidentical progesterone as Progesterone Powder, Bioidentical Micronized Powder, 10 grams for about \$40 on many online stores like Amazon. That is nearly a year's supply, depending on the dose you choose.

However, you will need to purchase some small stainless steel measuring spoons as you will need a 1/64 tsp, which is 25 mg and a 1/32 tsp, which is 50 mg. A normal dose is typically 25-50 mg and is taken 30 minutes before bed, as it has an anti-cortisol function and will increase GABA levels for a good night's sleep.

Unfortunately, this vendor frequently runs out of product, and if that's the case, then you can use [Simply Progesterone by Health Natura](#). It's premixed with vitamin E and MCT oil. Again, while Health Natura states that its product is for "topical use only," I recommend applying it transmucosally, by rubbing it on your gums.

If you are a menstruating woman, you should take the progesterone during the luteal phase or the last half of your cycle, which can be determined by starting 10 days after the first day of your period and stopping the progesterone when your period starts.

If you are a male or non-menstruating woman, you can take the progesterone every day for four to six months and then cycle off for one week. The best time of day to take progesterone is 30 minutes before bed as it has an anti-cortisol function and will increase GABA levels for a good night's sleep.

This is what I have been personally doing for over a year with very good results. I am a physician so do not have any problems doing this. If you aren't a physician, you should consult one before using this therapy, as transmucosal progesterone therapy requires a doctor's prescription.

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